

The Brazilian Grape Germplasm Bank: phenology and resistance to main fungal diseases

U.A. Camargo, J.D.G. Maia, C.A.E. Machado, P.S. Ritschel*

Embrapa Grape and Wine, Bento Gonçalves, Rio Grande do Sul, Brazil

*Corresponding author: patricia@cnpuv.embrapa.br

In recent years viticulture has reached a very important role in Brazilian fruit production, not only in temperate zones, but also as an alternative for tropical regions. These different climates require cultivars with wide-ranging production cycles. In temperate climates, such as in Southern Brazil, cultivars with different production cycles allow an increase in the harvesting period. Early grapes, demanded by growers in tropical zones such as in northeast Brazil, allow more than one annual harvest. The most important fungal diseases in Brazil are downy mildew (*Plasmopara viticola*), powdery mildew (*Uncinula necator*), anthracnose (*Elsinoe ampelina*), and bunch rot (*Botrytis cinerea* and other agents). In some cases, phytosanitary treatment can reach 30% of production costs. Genetic breeding can play a role in the development of new cultivars with different production cycles and greater tolerance to the main fungal diseases. The purpose of this work is to evaluate the phenology and disease incidence of grape accessions of the Brazilian germplasm bank in order to give support to the breeding program. For ten years, 700 accessions were evaluated and classified as very early (0.6%), early (13.9%), medium (43.6%), late (41.8%) or very late (0.3%). In the same period, 1,100 accessions were evaluated for disease resistance. The Brazilian grape germplasm bank maintains resistance sources to the main fungal grape diseases which occur in the country. However, resistance to downy mildew and anthracnose are less widespread in the studied sample. More information about the Brazilian grape germplasm bank can be found on the web at <http://www.cnpuv.embrapa.br/prodserv/germoplasma/>. These results assist in the development of new grape cultivars, in order to give support to the evolution and expansion of Brazilian viticulture.